



THE DEPARTMENT OF THE NAVY'S INFORMATION TECHNOLOGY MAGAZINE

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## Navy and Marine Corps: Good Neighbors in the Frequency Spectrum Community

By Thomas Kidd and Elizabeth Morin - [April-June 2015](#)

Encroachment issues commonly occur between neighbors when homeowners add a new feature to their home that extends onto another landowner's property, such as the addition of a new patio or a landscaping feature. When structural encroachment disputes occur over clearly defined property lines, legal remedies might include easements or a legal order to remove the disputed structure. However, not all encroachment issues are as easy to resolve.

If your neighbor built a second story on his house that blocks your cherished scenic view, or built a new garage close to your property line that causes snow to drift across your driveway, this may, or may not, be considered encroachment under the law. Unfortunately, the impact to you is the same: your neighbor has acted without considering how the change will affect your quality of life.

Imagine for a moment if your neighbor's new second floor blocked the signal for your satellite TV reception, or if every time he used his remote control security system, your car door unlocked. Under the law, this may, or may not, be encroachment into your property. These types of conflicts do occur; they are known as frequency spectrum encroachment, and they have become a very real concern for the Navy. In this article we will discuss a few things that the Department of the Navy is doing to resolve frequency spectrum encroachment.

In his 2010 Presidential Memorandum: "[Unleashing the Wireless Broadband Revolution](#)," President Obama wrote, "Innovative new mobile technologies hold the promise for a virtuous cycle — millions of consumers gain faster access to more services at less cost, spurring innovation, and then a new round of consumers benefit from new services."

While consumers are enjoying a rapid evolution in new wireless technologies, many of these technologies must compete with the Navy's usage of the electromagnetic spectrum for a wide range of applications including communications and radar technologies. Unlike roadways, power lines, water pipes or other physical infrastructure, which can be expanded to meet increasing demand, the frequency spectrum is a finite resource. Increased demand requires complex coordination and management as spectrum encroachment may limit the Navy's ability to use test and training ranges, special use airspace, such as military operations areas, and other operating areas used to conduct critical training and testing to assure our warfighters are the best they can be.

Frequency spectrum encroachment can not only create disruption between wireless systems, but can also threaten the close relationships between the Navy and its neighbors if Navy operations create interference in the surrounding communities. The Navy and Marine Corps strive to be excellent neighbors; therefore it is vital that we address these issues quickly and in a manner that is mutually beneficial wherever feasible. Frequency encroachment challenges are not limited to civilian communities, they can also occur between government entities, for example, when military technology sold to civil law enforcement results in encroachment if spectrum supportability is not closely managed.

The President addressed this in his 2014 Presidential Memorandum: "[Expanding America's Leadership in Wireless Innovation](#)," when he wrote, "We must continue to make additional spectrum available as promptly as possible for the benefit of consumers and businesses. At the same time, we must ensure that Federal, State, local, tribal, and territorial governments are able to maintain mission critical capabilities that depend on spectrum today, as well as effectively and efficiently meet future requirements."

In our personal lives, an inconsiderate neighbor may build monstrosities with little regard for how they may affect their neighbor's property values or quality of life. A considerate neighbor will discuss his plans. In some neighborhoods, local covenants mandate concurrence between neighbors before new construction permits are issued. The same is true among spectrum users. In some circumstances, emerging technologies barge into the spectrum with little consideration of the impact on their spectrum neighbors. Fortunately, most members of the spectrum community work hard to be good neighbors. Depending on the situation, there are voluntary and mandatory forums where spectrum neighbors can get together to discuss their plans and avoid or minimize encroachment.

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The newest challenge to spectrum encroachment, much like your neighbor's second story blocking your satellite TV signal, is associated with non-spectrum related structures. These structures are not intended to transmit, and therefore are not required to be certified into the local electromagnetic environment. However, these structures may impact their spectrum neighbors. Just like your considerate neighbors didn't intentionally block your TV signal, new construction is not designed to intentionally block radio frequencies. Had you known your neighbors were planning construction, you could have planned to move your satellite dish.

In the case of a blocked view, very good neighbors might even alter their plans slightly to maintain neighborhood harmony. Recently, several forums have been developed among Navy and Marine Corps spectrum users and their local spectrum or non-spectrum neighbors to offer a venue for addressing encroachment issues. Most are voluntary, but a few, like the [DoD Siting Clearinghouse](#), have been mandated by Congress.

As new wireless technologies continue to explode in popularity, the coming years will be a critical time to address spectrum encroachment issues. We must be vigilant in protecting Navy and Marine Corps systems from encroachment while simultaneously striving to be good neighbors and preserving our relationships with local communities and government agencies.

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CHIPS is an official U.S. Navy website sponsored by the Department of the Navy (DON) Chief Information Officer, the Department of Defense Enterprise Software Initiative (ESI) and the DON's ESI Software Product Manager Team at Space and Naval Warfare Systems Center Pacific.

Online ISSN 2154-1779; Print ISSN 1047-9988  
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